



Churchside Federation Science Skills Progression Ladder



Golden Threads	Investigation	Observation	Application
Reception	Children know about similarities and differences in relation to places, objects, materials and living things	They make observations of animals and plants and explain why some things occur, and talk about changes	They talk about the features of their own immediate environment and how environments might vary from one another
Year One	Sc1 Suggest what might happen and perform simple tests Sc2 Explore using senses and record findings in simple ways Sc3 Collect evidence to try to answer a question	Sc4 Make simple comparisons through observation	Sc5 Identify and classify based on simple criteria
Year Two	Sc6 Explore and observe in order to collect data and describe and compare findings Sc7 With help, suggest some ideas and questions and predict what might happen	Sc8 Use first-hand observation, own experience and simple information sources to make comparisons and answer questions Sc9 Observe closely using simple equipment Sc10 Recognise ways in which evidence can be collected	Sc11 Use simple scientific language Sc12 Perform simple tests Sc13 Record findings in various formats using standard units, drawings, diagrams, photographs, simple prepared formats such as tables and charts, tally charts, and displays Sc14 Say whether what happened was what was expected and draw simple conclusions to help answer questions
Year Three	Sc15 Ask relevant questions Sc16 With help, set up and carry out simple practical enquiries, comparative and fair tests Sc17 Suggest what might happen in comparative and fair tests	Sc18 Make careful observations and comparisons Sc19 Recognise what constitutes a fair test Sc20 Identify simple patterns, changes, similarities and differences	Sc21 Make measurements using standard units Sc22 Discuss and describe findings Sc23 Communicate findings using simple scientific language in written explanations, drawings, labelled diagrams, keys, bar charts or tables Sc24 Use results to draw simple conclusions



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Year Four	<p>Sc25 Set up and carry out simple practical enquiries, comparative and fair tests</p> <p>Sc26 Put forward ideas about testing and make predictions</p>	<p>Sc27 Make close observations and comparisons</p> <p>Sc28 Observe patterns and suggest explanations</p> <p>Sc29 Collect data</p> <p>Sc30 Recognise and explain why a test is fair or unfair</p> <p>Sc31 Identify simple trends to answer questions</p>	<p>Sc32 Make accurate measurements using standard units and begin to think about why measurements should be repeated</p> <p>Sc33 Use scientific evidence to answer questions</p> <p>Sc34 Use a range of equipment, including data loggers and thermometers</p> <p>Sc35 Gather and record findings through drawings, photographs, labelled diagrams, keys, models, presentations, tables, graphs and displays, using scientific language</p> <p>Sc36 Report on what the evidence shows through written explanations of results and conclusions and reports</p> <p>Sc37 Use results to draw simple conclusions, suggest improvements and raise further questions</p>
Year Five	<p>Sc38 Plan different types of scientific investigations</p> <p>Sc39 Make predictions based on scientific knowledge</p> <p>Sc40 Carry out a range of scientific investigations</p>	<p>Sc41 Begin to recognise and control variables where appropriate during investigations</p> <p>Sc42 Identify trends and patterns and offer explanations for these</p>	<p>Sc43 Carry out a fair test explaining why it is fair</p> <p>Sc44 Take measurements using a range of scientific equipment with increasing accuracy and precision</p> <p>Sc45 Understand why observations and measurements need to be repeated</p> <p>Sc46 Select information from provided sources</p> <p>Sc47 Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs</p> <p>Sc48 Produce written explanations of results, causal explanations and conclusions</p> <p>Sc49 Use results to make predictions for further tests</p>



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Year Six	<p>Sc50 Select and plan the most appropriate type of scientific enquiry to answer specific questions</p> <p>Sc51 Make predictions based on scientific knowledge and understanding</p> <p>Sc52 Carry out a range of scientific investigations</p>	<p>Sc53 Recognise and control variables where appropriate during investigations</p> <p>Sc54 Identify scientific evidence that has been used to support or refute ideas</p>	<p>Sc55 Take measurements using a range of scientific equipment with accuracy and precision</p> <p>Sc56 Decide when observations and measurements need to be checked, by repeating, to give more reliable data</p> <p>Sc57 Select information from a range of sources</p> <p>Sc58 Record data and results of increasing complexity, using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models, making appropriate use of ICT</p> <p>Sc59 Reporting findings from investigations, including written explanations of results, explanation involving causal relationships, and conclusions</p> <p>Sc60 Present reports of findings in written form, displays and presentations</p> <p>Sc61 Use test results to make predictions and set up further comparative and fair tests</p>
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